

CLAIMS

1. A method for emptying bulk goods, without contamination, from a container with a flexible outlet into a device mounted after it, via a connection tube (1), wherein the method has the following method steps:

arrangement of the container with an outlet tied to a tying point (11.1) above the connection tube,

arrangement of a hose film (3) around the connection tube, so that it rests against the edge of the connection tube on the inlet side so that it seals,

tying the hose film above the connection tube so that one end of the hose film, which can be widened in the shape of a funnel, remains above the tying point (3.1),

clamping connection of the outlet of the flexible container and the hose film so that free hose film remains over the clamp connection,

detachment of the tying points (11.1, 3.1) from the outlet and hose film and emptying of the bulk goods,

tying (3.2) of the free end of the hose film remaining above the clamping point to the container outlet and its securing to it,

pulling hose film out of a hose film supply until clean hose film (3) is available above the connection tube (1),

sealing of the hose film at two adjacent sealing points (3.3, 3.4) in the clean region,

cutting of the hose film between the two sealing point (3.3, 3.4),

pulling of hose film out of the hose film supply and tying the same again at a tying point (3.1) at a distance from the cutting point,

removing the sealing point (3.4) in the region of the cutting point and widening of the hose film between the cutting point and the tying point (3.1) located at

a distance from the cutting point to form a funnel shape.

2. The method according to Claim 1, characterised in that an axial sealing ring(5), acting against the edge of the connection tube on the inlet side above the hose film, is used to make the sealing contact of the hose film against the edge of the connection tube (1) on the inlet side.
3. The method according to any one of the preceding claims, characterised in that a film carrier (2) surrounding the connection tube (1) is used to receive the hose film supply.
4. The method according to Claim 3, characterised in that the end of the hose film is revealed and is clamped with an elastic fixing ring (4) against a first bead (1.1) running around the periphery of the connection tube (1).
5. The method according to any one of the preceding claims, characterised in that a radial expansion ring (9) surrounding the connection point on the outside and a counter ring(10) supporting the connection point on the inside are used for the clamping connection of the outlet of the flexible container and the hose film.
6. The method according to Claim 4, wherein, when the hose film supply is used up, the hose film is no longer pulled out of the hose film supply and the following method steps are carried out after the hose film has been cut between the two sealing points (3.3, 3.4):
removing the axial sealing ring (5),

pulling the elastic fixing ring (4), with the hose film , out of the first bead (1.1) into a second bead (1.2) located above the first bead (1.1),
fitting a new film carrier (2) with new hose film, and clamping the end of the new hose film with an elastic fixing ring (4) in the first bead (1.1) against the connection tube (1),
pulling the beginning of the new hose film out of the film carrier (2),
sealing the new hose film against the old hose film at a sealing point (3.5) located underneath the sealing point (3.4) of the old hose film,
pulling up the new hose film with the old hose film connected to it until the end of the old hose film is released from the second bead (1.2),
sealing the new hose film underneath the end of the old hose film at two adjacent sealing points (3.6, 3,7),
cutting the new hose film between the two sealing points (3.6, 3.), disposing of the old hose film packed in the new hose film,
further pulling up of the new hose film and tying the new hose film at a tying point (3.1) located at a distance from the sealing point (3.7) remaining at the end,
removing the end sealing point (3.7) and widening of the new hose film to form a funnel shape.

7. A method for emptying bulk goods, without contamination, from a container with a flexible outlet into an after-mounted device via a connection tube (1), wherein the method has the following method steps:
arrangement of the container with an outlet tied to a tying point (11.1) above the connection tube,
arrangement of a hose film (3) sufficient for one refilling process around the connection tube, so that

it rests against the edge of the connection tube on the inlet side so that it seals,
tying the hose film above the connection tube so that one end of the hose film, which can be widened in the shape of a funnel, remains above the tying point (3.1),
clamping connection of the outlet of the flexible container and the hose film so that free hose film remains over the clamp connection,
detachment of the tying points (11.1, 3.1) from the outlet and hose film and emptying of the bulk goods,
tying (3.2) of the free end of the hose film remaining above the clamping point to the container outlet and its securing to it,
pulling the hose film until clean hose film (3) is available above the connection tube (1),
sealing of the hose film at two adjacent sealing points (3.3, 3.4) in the clean region,
cutting of the hose film between the two sealing point (3.3, 3.4),
fitting a new hose film and clamping the end of the new hose film against the connection tube underneath the old hose film,
pulling out the beginning of the new hose film,
sealing the new hose film against the old hose film at a sealing point (3.5) located underneath the sealing point (3.4) of the old hose film,
pulling up the new hose film with the old hose film connected to it until the end of the old hose film is released,
sealing the new hose film underneath the end of the old hose film at a sealing point (3.6),
cutting the new hose film underneath the sealing point (3.6), disposing of the old hose film packed in the new hose film,

further pulling up of the new hose film and tying the hose film at a tying point (3.1) located at a distance from the sealing point (3.6) remaining at the end, widening the new hose film to form a funnel.

8. The method for emptying bulk goods, without contamination, from a transport container with a rigid outlet into an after-mounted device via a connection tube (1), wherein the method has the following method steps:

arranging the transport container in the sealed condition above the connection tube,
arranging a hose film (3) around the connection tube, so that it rests against the edge of the connection tube on the inlet side so that it seals,
tying the hose film above the connection tube so that one end of the hose film, which can be widened in the shape of a funnel, remains above the tying point (3.1),
clamping connection of the rigid outlet of the container and the beginning of the hose film,
detachment of the tying point (3.1) of the hose film and emptying of the bulk goods,
pulling hose film out of a hose film supply until clean hose film (3) is available above the connection tube (1),
sealing of the hose film at two adjacent sealing points (3.3, 3.4) in the clean region,
cutting of the hose film between the two sealing point (3.3, 3.4),
pulling of hose film out of the hose film supply and tying the same again at a tying point (3.1) at a distance from the cutting point,
removing the tying point (3.4) in the region of the cutting point and widening of the hose film between the cutting point and the tying point (3.1) located at

a distance from the cutting point to form a funnel shape.

9. The method according to Claim 8, characterised in that an axial sealing ring (5) acting over the hose film against the edge of the connection tube on the inlet side is used for making the sealing contact of the hose film against the edge of the connection tube (1) on the inlet side.
10. The method according to any one of Claims 8 and 9, characterised in that a film carrier (2) surrounding the connection tube (1) is used to receive the hose film supply.
11. The method according to Claim 10, characterised in that the end of the hose film is revealed and is clamped with an elastic fixing ring (4) against a first bead (1.1) running round the periphery of the connection tube (1).
12. The method according to Claim 11, wherein, when the hose film supply is used up, the hose film is no longer pulled out of the hose film supply and the following method steps are carried out after the hose film has been cut between the two sealing points (3.3, 3.4):
removing the axial sealing ring (5),
pulling the elastic fixing ring (4), with the hose film, out of the first bead (1.1) into a second bead (1.2) located above the first bead (1.1),
fitting a new film carrier (2) with new hose film, and
clamping the end of the new hose film with an elastic fixing ring (4) in the first bead (1.1) against the connection tube (1),
pulling the beginning of the new hose film out of the film carrier (2),

sealing the new hose film against the old hose film at a sealing point (3.5) located underneath the sealing point (3.4) of the old hose film,
pulling up the new hose film with the old hose film connected to it until the end of the old hose film is released from the second bead (1.2),
sealing the new hose film underneath the end of the old hose film at two adjacent sealing points (3.6, 3.7),
cutting the new hose film between the two sealing points (3.6, 3.7), disposing of the old hose film packed in the new hose film,
further pulling up of the new hose film and tying the new hose film at a tying point (3.1) located at a distance from the sealing point (3.7) remaining at the end,
removing the end sealing point (3.7) and widening of the new hose film to form a funnel shape.

13. The method according to any one of the preceding claims, characterised in that the sealing points (3.2-3.7) are designed as tying points.
14. The method according to any one of Claims 1-12, characterised in that the sealing points (3.2-3.7) are designed as welds.
15. A method for filling bulk goods, without contamination, into a container with a flexible inlet from a pre-mounted device via a connection tube (1), wherein the method has the following method steps:
arranging the container with open inlet above the connection tube,
arranging a hose film (3) around the connection tube so that it rests sealing against the edge of the connection tube on the inlet side,

tying the hose film underneath the connection tube so that one end of the hose film that can be widened to form a funnel shape remains underneath the tying point (8.1),
clamping connection of the inlet of the flexible container and the hose film so that a free end of the inlet remains above the clamped connection,
detachment of the tying point (8.1) of the hose film and filling the container with bulk goods,
pulling hose film out of a hose film supply until clean hose film (3) is available underneath the connection tube (1),
sealing the hose film at two adjacent sealing points (8.2, 8.3) in the clean region,
cutting the hose film between the two sealing points (8.2, 8.3),
tying (8.5) the free end of the inlet remaining above the clamping point against the hose film and securing it to it,
sealing of the inlet underneath the clamped connection at two adjacent points (8.6, 8.7), and cutting the inlet between them,
pulling hose film out of the hose film supply and retying the same at a tying point (8.1) at a distance from the cutting point of the hose film,
removing the sealing point (8.2) in the region of the cutting point of the hose film, and widening the hose film between the cutting point and the tying point (8.1) located at a distance from the cutting point to form a funnel shape.

16. The method according to Claim 15, characterised in that a radial sealing ring (19) acting over the hose film against the end of the connection tube on the outlet side is used to make the sealing contact of the hose film against the end of the connection tube (1) on the outlet side.

17. The method according to Claim 15 or 16, characterised in that a film carrier (2) surrounding the connection tube (1) is used to receive the hose film supply.
18. The method according to Claim 17, characterised in that the end of the hose film is revealed and clamped with an elastic fixing ring (4) against a first bead (1.1) running round the periphery of the connection tube (1).
19. The method according to any one of Claims 15 - 18, characterised in that a radial expanding ring (9) surrounding the connecting point on the outside and a counter ring (10) supporting the connecting point on the inside are used for the clamping connection of the inlet of the flexible container and the hose film.
20. The method according to Claim 18, wherein, when the hose film supply is used up, the hose film is no longer pulled out of the hose film supply after the hose film is cut between the two sealing points (8.2, 8.3), and the following method steps are carried out: removing the axial sealing ring (19), pulling the elastic fixing ring (4), with the hose film, out of the first bead (1.1) into a second bead (1.2) located underneath the first bead (1.1), fitting a new film carrier (2) with new hose film, and clamping the end of the new hose film with an elastic fixing ring (4) in the first bead (1.1) against the connection tube (1), pulling the beginning of the new hose film out of the film carrier (2), sealing the new hose film at a sealing point (8.8) located underneath the sealing point (8.1) of the old hose film,

pulling down the new hose film with the old hose film until the end of the old hose film is released from the second bead (1.2),
sealing the new hose film above the end of the old hose film at two adjacent sealing points (8.9, 8.10),
cutting the new hose film between the two sealing points (8.9, 8.10), disposing of the old hose film packed in the new hose film,
further pulling down of the new hose film and tying the new hose film at a tying point (8.1) located at a distance from the sealing point (8.10) remaining at the end,
removing the end sealing point (8.10) and widening of the new hose film to form a funnel shape.